

HISTORICAL AND GEOGRAPHIC BACKGROUND

HISTORY AND REGIONAL SETTING

Firth is located at southeast quadrant of the State of Nebraska. It is situated at the extreme southern part of Lancaster County, only half a mile north of Gage County line, near the headwaters of the Nemaha River and in the famous "Nemaha Valley", which Horace Greeley characterized as the "Garden of America".

In 1856 a number of pioneers crossed the Missouri River and penetrated as far as the banks of Salt Creek in Clay County now Lancaster. The first permanent settlement was made in 1857 at Olathe, about fifteen miles south of present City of Lincoln. John D. Prey and his family were the first settlers. In the same year, the settlement extended from Hickman to Saltillo along the Salt Creek.

The first religious service held in the County was conducted by Rev. Turman, a missionary of the Methodist Church in the summer of 1858.

From 1859 to 1862, there was little progress made in the settlement of the County. Even though there were a number of new arrivals, the departures were enough to offset them. The passage of the homestead law in 1862 gave an impetus to immigration from the east. Since then, the increase in population and progress in the development of the resources of the Lancaster County have been constant and steady.

The early settlers were mainly from Iowa, Illinois, Missouri, Pennsylvania and other states to the east. Most of them, chiefly of German, Dutch, Irish and Swedish descent, were American-born.

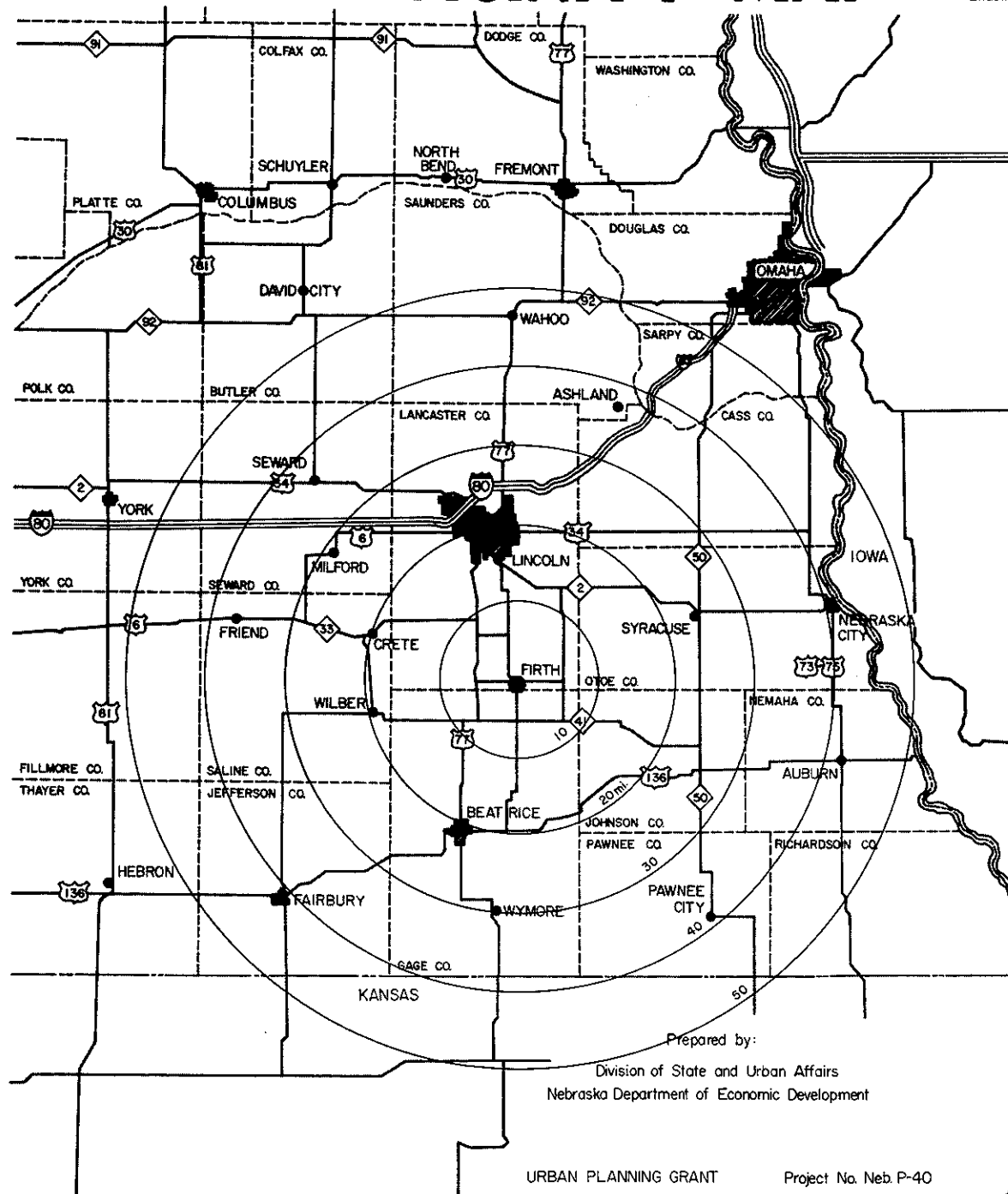
The name of Firth was given in honor of Superintendent Firth of the Atchison and Nebraska Railroad. It was organized as a village in February, 1879. The first Village Board of Trustees Chairman was G.G. Beams; the Village Clerk was W.H. More; and the Treasurer was C.F. Fleckinger.

The village is 17 miles southeast of Lincoln, and 19 miles northeast of Beatrice. State spur 341 joins State Highway 41 which goes east and west south of Firth; and route 395 connects U.S. Highway 77 in north and south direction. Chicago, Burlington and Quincy Railroad which circles the western part of the village, provides passenger and freight services to many parts of the country.

Illustration 1 - Vicinity Map shows the exact location of Firth with respect to the highway network and some larger towns in eastern Nebraska.

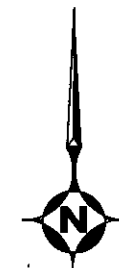
VICINITY MAP

Illustration 1



Prepared by:
Division of State and Urban Affairs
Nebraska Department of Economic Development

URBAN PLANNING GRANT Project No. Neb. P-40
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SCALE 1" = 10 miles

0 mi. 10 mi. 20 mi. 30 mi.

PHYSIOGRAPHY

Lancaster County is a part of a dissected glacial-drift plain that was covered to various depths by two silty wind-laid loess formations. In many places dissection has removed both of these deposits, exposing the glacial drift and locally the bedrock formations known as Dakota sandstone and Permian limestone and shale.

In its general physiographic aspect, the County is a broad elongated basin, its axis followed throughout by Salt Creek, tributaries of which have produced minor irregularities in the outline of the basin. The uplands are moderately to strongly rolling. The greatest relief is in West Oak, Little Salt, Elk and Denton Precincts, whereas the smoothest uplands are on a high northeast-southwest divide across the southern tiers of precincts. The nearly level or gently undulating alluvial lands, principally along Salt Creek and its larger tributaries, occupy a relatively small part of the county.

Drainage is chiefly northward and eastward to the Platte River through Salt Creek and its tributaries of the Big Blue and Nemaha Rivers. As a whole, the County is well drained.

The predominant tree species found are ash, elm, oak, walnut, hackberry, maple and cottonwood. The woodland is located mainly along the watercourses. In some areas,

woodland cover extends out into wider but often it is rather narrow. The stands are usually fully stocked, but tree quality and stand composition are poor.

Many species of wildlife occur in the County. Moderate numbers of pheasants, white-tailed deer, squirrels and cottontail rabbits are found and furnish a great deal of sport for some small game hunters. The diversity of vegetation types, from dense woodland to rowcropped fields, maintains the large variety of non-game, or songbirds. The esthetic value of non-game birds and mammals is a facet of the wildlife resources of an area which will assume increasing importance in the future.

WATER SUPPLY

To have ample water supply is one of the most important factors in the development and expansion of a community. Throughout history, many cities were formed at the banks of rivers or at places where there was ample water supply. Firth is lucky to have plenty of ground water supply. Good but medium-hard well water in sufficient quantity for family and livestock needs is readily obtained over areas in and around the Village of Firth. Throughout most of the uplands, the water comes mainly from lenses and buried channels of sand and gravel in the glacial-drift deposits and from sandstone bedrock at depths of 40 to 100 feet. In some areas, potable water is obtained from limestone and sandy shale formations, but this supply is rather limited and uncertain.

The depth to water in any locality on the uplands depends partly on the character of the relief and the thickness of the loessial cap, but chiefly on the thickness and textural composition of the drift deposits and on the depths to suitable aquifers in the bedrock. Water occurring at depths of more than 250 feet below the levels of the uplands usually is too salty to drink.

Throughout most of the alluvial lands, an abundance of good water commonly obtained from sandy stream-laid sediments at depths of 20 to 30 feet. A limited supply of drinking water is obtained from springs at or near the contact of the drift and bedrock formations. Only a few farmers along the sides of the larger valleys, where wells are rather uncertain, depend on this source. Streams provide a limited supply of water for livestock needs only. Most of the streams are intermittent, many are dry most of the year, and much of the water from the remaining ones is not potable.

Natural freshwater lakes do not exist in Firth area. Some artificial lakes or ponds in the nearby areas can furnish water for livestock and domestic uses and local recreation. The proposed lake on the east part of Firth will ensure the Village with even more water supply and recreational uses.

Since Firth obtains all of its water from the wells, more thoughts should be given to the location and care of wells. Water moving over and through polluted ground may affect the quality of the well water. Farm wells,

too, should be even more careful, because it is not uncommon to see shallow, poorly cased open wells immediately below feed yards and other sources of contamination, where they receive sediment and surface debris from surrounding land.

GEOLOGY

Lancaster County is in the Prairie soil region of the United States. All the soils have developed under the influence of a vegetation of tall grass except those occupying part of the bottom lands and part of the most steeply sloping areas. Most of the soils are very dark and highly granular in the surface layers, friable throughout, and easily penetrated by air, roots, and water. Only a few contain significant quantities of lime, but so far as crops are concerned, none seems to be deficient in calcium.

On the basis of use capability and productivity as influenced chiefly by depth and friability of soil material and character of parent material, the soils in the Firth Planning Area are grouped as follows:

1. Deep Heavy Soils of the Loessial Uplands - These are represented by the Crete series which have a very dark grayish-brown or nearly black friable fine granular surface soil 10 to 14 inches thick, and have a dense claypan layer in the upper part of the subsoil and horizon of lime enrichment in the lower part. Owing to the imperviousness of the claypan in the

subsoil, they are better suited to growing small grains than corn during most years.

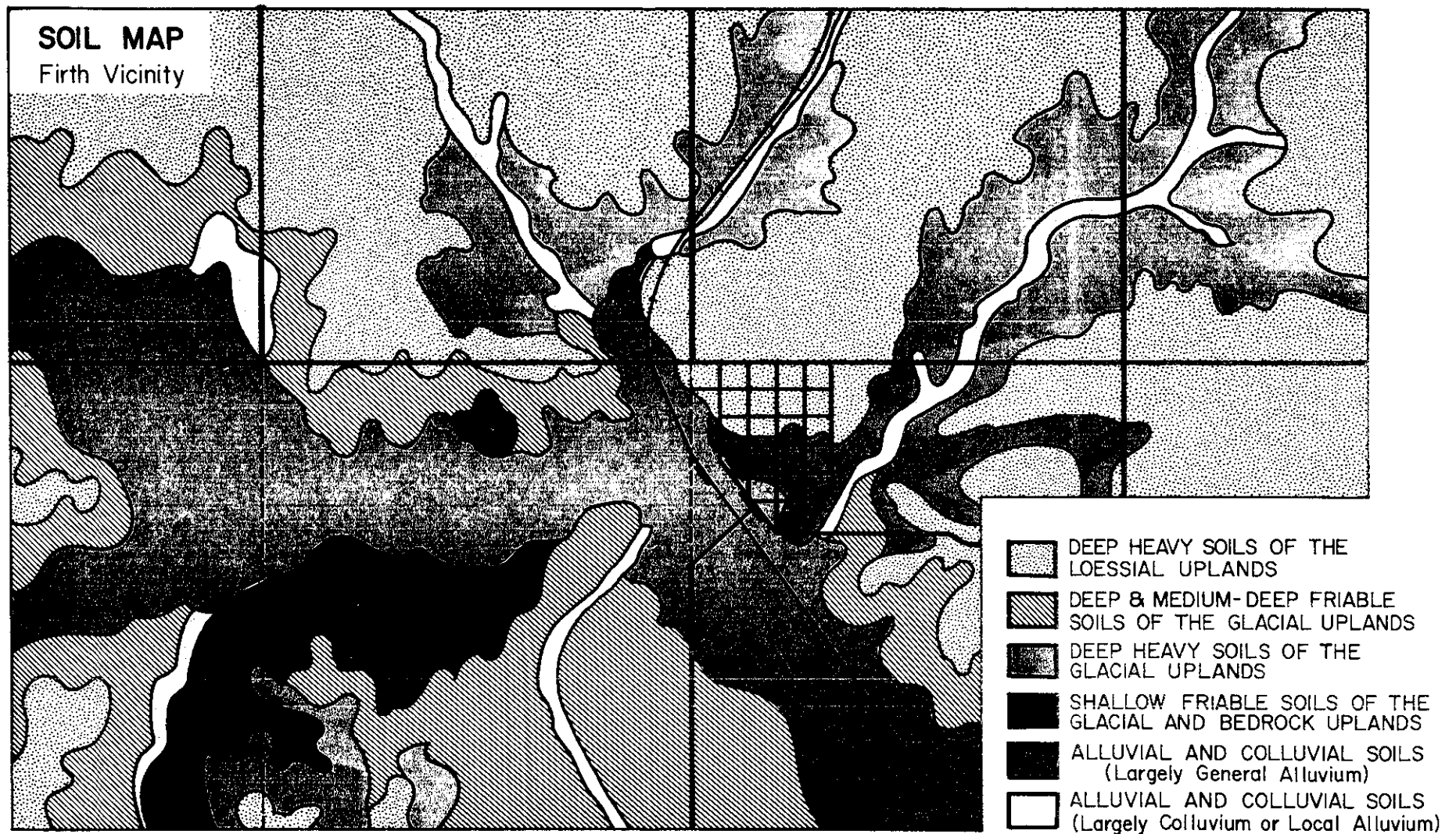
2. Deep Heavy Soils of the Glacial Uplands - This comprises a single type of the Pawnee series. It differs from the Crete series mainly in having a little sand and some gravel in the profile and in having a substratum of drift instead of loess. The upper part of the subsoil is claypanlike, and the lower part has a horizon of lime enrichment. The soil is used principally for corn, but is better suited to small grains, mainly wheat, which can usually mature before the moisture stored near the surface during spring and winter is exhausted.
3. Alluvial and Colluvial Soils - The alluvial and colluvial soils in the Firth Planning Area comprise the Wabash and Judson series. They occur in bodies and strips of various widths on the bottom lands along the stream valleys. These soils are highly productive and are mostly under cultivation. Corn and alfalfa are the principal crops on the bottom lands, which receive considerable runoff from higher land and are a little too wet for the highest yields of small grains.
4. Deep and Medium-Deep Friable Soils of the Glacial Uplands - These soils include the Carrington and Burchard

series. The Carrington soils have a dark surface soil, fairly friable subsoil, and ample fertility. Associated with the Carrington are some areas of the Burchard, in which the drift-derived soils, although otherwise similar to those of the Carrington, have an abundance of lime in the lower part of the subsoil, commonly at a depth of about 30 inches.

5. Shallow Friable Soils of the Glacial and Bedrock Uplands - The soils are represented by the Steinauer series in this area. The Steinauer soils are developed on glacial drift consisting of silt, clay, sand and gravel. They are unimportant in extent, and most of them are either too steeply sloping, too stony, or too severely eroded to be of value for cultivation and are used as pasture.

The Soil Map shows the location and extent of the above mentioned five different types of soils in the Firth Planning Area. The Map indicates that the Deep Heavy Soils of the Loessial Uplands, and Alluvial and Colluvial Soils are most abundant. With the exception of Shallow Friable Soils of the Glacial and Bedrock Uplands, which are not extensive, all the other types of soils in the Firth Planning Area are very fertile and suitable for agricultural uses.

Illustration 2



CLIMATE

The climate of Firth, like many other places in central United States, is continental in nature. Variation in temperature and precipitation between winter and summer are rather wide. It is in a favorable location in respect to the moisture-laden winds from the Gulf of Mexico. The moisture content of the air contributes to a smaller daily range in temperature than if it were drier. The southern location of Firth permits some of the weaker cold fronts to lose a portion of their effectiveness before reaching the area.

The climate is well suited to the production of grain, vegetables, hay crops, and livestock. Cool springs and considerable rain and snow favor rapid growth of winter wheat and spring-planted small grains. In the long summer days and nights, the weather and rainfall are very favorable for the growth of corn. The long and pleasant fall has only occasional periods of rainy weather, giving the farmers ample time to harvest the corn and seed the land for winter wheat. Low winter temperatures are usually of short duration and usually are accompanied by the snow which protects the winter-grown crops from serious injury.

For a period of 30 years, from 1932 to 1961, the mean daily maximum temperature in the Firth region was 63.6 degrees F.;

the mean daily minimum was 41.0 degrees F.; and the mean monthly temperature was 52.3 degrees F. The record highest temperature was 117 degrees F.; and the record lowest was -20 degrees F. The mean precipitation, for the 30 year period, was 28.94 inches; and the mean snow and sleet precipitation was 28.2 inches.

The average date of the last killing frost is April 18, and that of the first is October 15, which indicates an average frost-free season of 180 days. Normally, about three-fourths of the annual precipitation falls from April to October, the seven months comprising the growing season. In summer, the rainfall usually occurs as heavy thunder-showers, but torrential rains are rare. Droughts are almost unknown in May and June, but dry periods sometimes occur in the latter part of July and during August.

From about February 1 to May 1, the prevailing wind is from the north and during the rest of the year from the south. Strong winds are common, but tornadoes are rare. The average annual wind velocity is 10.5 miles per hour. The relative humidity is fairly regular. The average for the year being 64 per cent.